Name:

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Geometry, Period

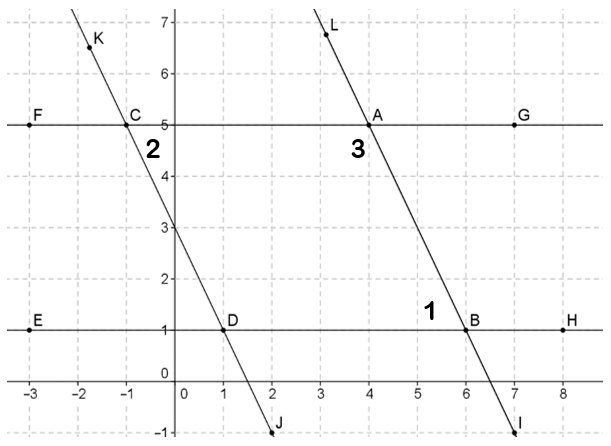
Due Date: Mon, 16 March 2015

**Geometry**

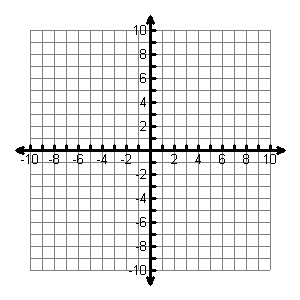
**Homework**

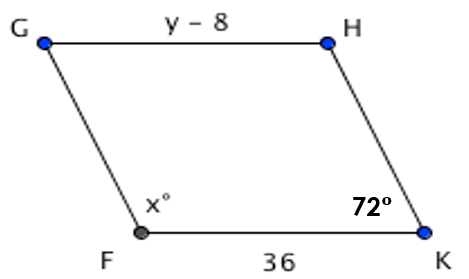


**Quadrilaterals, part 1: Parallelograms!**

***Directions:***  *Carefully read and answer the following questions. Be sure to use the appropriate formulas!*

1. Use the figure above to answer the following questions.
   1. Find the slopes of lines *AC* and *BD*. What do you notice about these lines?
   2. Find the slopes of lines *AB* and *CD*. What do you notice about these lines?
   3. Find the length of line segments *AC* and *BD.* What do you notice about these lengths?
   4. Find the length of line segments *AB* and *CD.* What do you notice about these lengths?
2. Use the figure above to answer the following questions.
   1. Given that *m*∠*CDB* = 125°, find the measures of the 3 numbered angles. Label these angles on the diagram.
   2. Angles CAB and CDB are **opposite angles.** What is the relationship between opposite angles? Name the other pair of opposite angles.
   3. Angles CAB and ABD are **consecutive angles** because they are next to each other inside the shape**.** What is the relationship between consecutive angles? Name the other 3 pairs of consecutive angles.

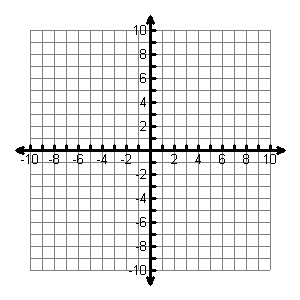
1. Quadrilateral ABDC is called a parallelogram. Copy the sentence in your notebook and correctly fill in the blank using the information you discovered in #1 & 2.
   1. In a parallelogram, there are 2 pairs of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides. (Hint: look at #1a & b)
   2. In a parallelogram, opposite sides are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (Hint: look at #1c & d)
   3. In a parallelogram, opposite angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   4. In a parallelogram, consecutive angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. A figure has vertices at (0, 0), (7, 2), (8, 5), and (1, 3). Is this quadrilateral a parallelogram? Explain how you know in at least 2 sentences. Be sure to include what we know about the sides of a parallelogram in your explanation.



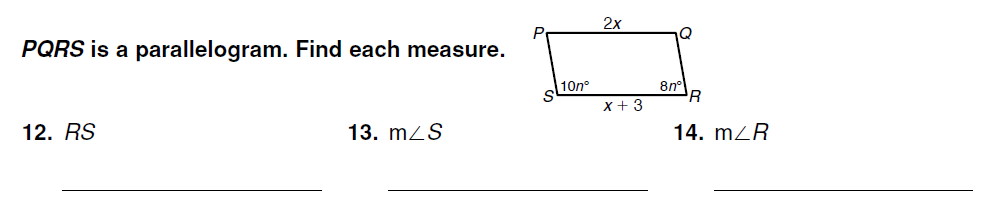
1. Given GH **||** FK and GF **||** HK.

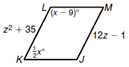
Find the values of x and y.

Find the *m*∠*G* and the *m*∠*K*.



1. A parallelogram has vertices at (-2, 2), (3, -1), (3, 4), and (-2, -3). Find the area of the parallelogram.



1. *PQRS* is a parallelogram. Find the following:
2. *RS*
3. m∠*S*
4. m∠*R*
5. *JKLM* is a parallelogram. Find each measure/length.
6. m∠*L*
7. m∠*K*
8. MJ